

CLAIMS

1. A protective helmet, comprising:

a substantially rigid outer shell defining a bottom opening and an internal cavity

5 for receiving a wearer's head;

an inner ring positioned substantially within and secured to said outer shell, said inner ring circumscribing an opening for receiving the wearer's head;

a suspension secured to said inner ring and including at least two straps intersecting one another within the internal cavity of said outer shell; and

10 a headband positioned substantially within said outer shell and adjacent the bottom opening of said outer shell, wherein the position of said headband relative to the inner ring can be manipulated, effectively adjusting the vertical position of the headband within and relative to the outer shell.

15 2. The protective helmet as recited in claim 1, and further comprising an adjustment mechanism connected to said headband, said adjustment mechanism including a control button accessible through an aperture defined through said inner ring, manipulation of said control button causing vertical movement of said adjustment mechanism and the connected headband with respect to the inner ring.

20 3. The protective helmet as recited in claim 2, wherein said inner ring includes an integral flange that extends from a lower edge of the ring, which serves to maintain separation

between said outer shell and the inner ring, thereby defining a cavity between the outer shell and the inner ring adapted to receive and substantially enclose the adjustment mechanism.

4. The protective helmet as recited in claim 2, wherein detents are defined at
5 vertically spaced intervals along said adjustment mechanism, each of which is adapted to receive and mate with a respective boss extending from said inner ring.

5. The protective helmet as recited in claim 4, wherein said detents are positioned on
either side of said control button and said bosses are positioned on either side of the aperture
10 defined through said inner ring.

6. The protective helmet as recited in claim 1, wherein said headband also includes a
a mechanism for adjusting its circumference.

15 7. The protective helmet as recited in claim 3, wherein the headband is positioned within the inner ring such that a brow portion of the headband abuts an inner surface of a front portion of the inner ring, with arms of the headband abutting and extending beyond the inner surface near a rear portion of the inner ring, said headband being connected to the inner ring by wrapping a cradle portion of the headband around the front portion of the inner ring,
20 sandwiching the front portion of the inner ring between the brow and cradle portions of the headband, the vertical adjustment mechanism then being secured to and between the arms of the headband with the control button extending through the aperture defined by the inner ring.

8. The protective helmet as recited in claim 7, wherein the assembly of the inner ring, headband, and vertical adjustment mechanism is positioned in the cavity defined between the outer shell and the inner ring.

5 9. The protective helmet as recited in claim 1, and further comprising an inner shell positioned within said the outer shell and also defining an opening and an internal cavity for receiving the wearer's head.

10. A protective helmet, comprising:
10 a substantially rigid outer shell defining a bottom opening and an internal cavity for receiving a wearer's head;
a headband positioned substantially within said outer shell and adjacent the bottom opening of said outer shell;
a suspension positioned within said outer shell, and including at least two straps
15 intersecting one another within the internal cavity of said outer shell; and
a means for adjusting the vertical position of the headband within and relative to the outer shell.

11. The protective helmet as recited in claim 10, wherein said means for adjusting the
20 vertical position of the headband includes:
an inner ring positioned substantially within and secured to said outer shell, said inner ring circumscribing an opening for receiving the wearer's head; and

an adjustment mechanism connected to said headband, said adjustment mechanism including a control button accessible through an aperture defined through said inner ring, manipulation of said control button causing vertical movement of said adjustment mechanism and the connected headband with respect to the inner ring.

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12. The protective helmet as recited in claim 11, wherein said inner ring includes an integral flange that extends from a lower edge of the ring, which serves to maintain separation between said outer shell and the inner ring, thereby defining a cavity between the outer shell and the inner ring adapted to receive and enclose the adjustment mechanism.

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13. The protective helmet as recited in claim 12, wherein detents are defined at vertically spaced intervals along said adjustment mechanism, each of which is adapted to receive and mate with a respective boss extending from said inner ring.

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14. The protective helmet as recited in claim 13, wherein said detents are positioned on either side of said control button and said bosses are positioned on either side of the aperture defined through said inner ring.

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15. The protective helmet as recited in claim 10, wherein said headband includes a mechanism for adjusting its circumference.

16. The protective helmet as recited in claim 12, wherein the headband is positioned within the inner ring such that a brow portion of the headband abuts an inner surface of a front

portion of the inner ring, with arms of the headband abutting and extending beyond the inner surface near a rear portion of the inner ring, said headband being connected to the inner ring by wrapping a cradle portion of the headband around the front portion of the inner ring, sandwiching the front portion of the inner ring between the brow and cradle portions of the
5 headband, the vertical adjustment mechanism then being secured to and between the arms of the headband with the control button extending through the aperture defined by the inner ring.

17. The protective helmet as recited in claim 16, wherein the assembly of the inner ring, headband, and vertical adjustment mechanism is positioned in the cavity defined between
10 the outer shell and the inner ring.

18. The protective helmet as recited in claim 10, and further comprising an inner shell positioned within the outer shell and also defining an opening and an internal cavity for receiving the wearer's head.